

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An image processing apparatus, comprising:

a code stream generating part ~~converting~~ configured to convert image data into two-dimensional wavelet coefficients, ~~quantizing~~ quantize the ~~same~~ coefficients, and ~~encoding code~~ the quantization result quantized coefficients so as to compress the image data and generate a code stream;

an additional information creating part ~~creating~~ configured to create additional information concerning the image data; [[and]]

an additional information embedding part ~~embedding~~ configured to embed the ~~thus-created~~ created additional information into the code stream as a code in an off-rule zone, which is not decoded by a JPEG 2000 standard rule; and

a terminating code providing part configured to forcibly provide a terminating code at a position before a code length position defined by header information, wherein

a zone defined from the position at which the terminating code is provided to the code length position is determined as the off-rule zone.

2. (Canceled)

3. (Currently Amended) The image processing apparatus as claimed in claim [[2]] 1, wherein:

said terminating code providing part ~~provides~~ is configured to provide the terminating code in a main header area of the code stream.

4. (Currently Amended) The image processing apparatus as claimed in claim 3,
wherein:

said terminating code providing part ~~provides~~ is configured to provide the terminating code before the code length position defined by a PLM marker, which describes a main header packet length.

5. (Currently Amended) The image processing apparatus as claimed in claim 3,
wherein:

said terminating code providing part ~~provides~~ is configured to provide the terminating code before the code length position defined by a TLM marker, which describes a main header tile length.

6. (Currently Amended) The image processing apparatus as claimed in claim 3,
wherein:

said terminating code providing part ~~provides~~ is configured to provide the terminating code before the code length position defined by a PPM marker, which collectively describes main header packet headers.

7. (Currently Amended) The image processing apparatus as claimed in claim 3,
wherein:

said terminating code providing part ~~provides~~ is configured to provide the terminating code before the code length position defined by a COM marker for comments.

8. (Currently Amended) The image processing apparatus as claimed in claim [[2]] 1, wherein:

said terminating code providing part ~~provides~~ is configured to provide the terminating code in an actual code data area of the code stream.

9. (Currently Amended) The image processing apparatus as claimed in claim 8, wherein:

said terminating code providing part ~~provides~~ is configured to provide the terminating code before the code length position defined by an SOT marker₁ which is added at the top of a tile code sequence for starting a tile.

10. (Currently Amended) The image processing apparatus as ~~elamed~~ claimed in claim 8, wherein:

said terminating code providing part ~~provides~~ is configured to provide the terminating code before the code length position defined by a PLT marker₁ which describes a tile header packet length.

11. (Currently Amended) The image processing apparatus as ~~elamed~~ claimed in claim 8, wherein:

said terminating code providing part ~~provides~~ is configured to provide the terminating code before the code length position defined by a PPT marker₁ which collectively describes tile header packet headers.

12. (Currently Amended) The image processing apparatus as claimed in claim 8, wherein:

said terminating code providing part ~~provides~~ is configured to provide the terminating code before the code length position defined by a COM marker for comments.

13. (Withdrawn) The image processing apparatus as claimed in claim 1 wherein:
said additional information embedding part regards a zone subsequent to an EOC marker which indicates the end of the code stream as the off-rule zone, and embeds the additional information therein as a code.

14. (Withdrawn) The image processing apparatus as claimed in claim 1, wherein:
said additional information embedding part embeds the additional information in a comment space in a COM marker for comments as a code.

15. (Withdrawn) The image processing apparatus as claimed in claim 1, wherein:
said additional information embedding part embeds the additional information in an off-rule zone in an off-rule zone of a marker itself other than a COM marker for comments.

16. (Withdrawn) The image processing apparatus as claimed in claim 1, wherein:
said additional information creating part creates, as the additional information, tamper resistance information for the image data.

17. (Withdrawn) The image processing apparatus as claimed in claim 1, wherein:
said additional information creating part creates, as the additional information, management information for the image data

18. (Withdrawn) The image processing apparatus as claimed in claim 1, wherein:
said additional information creating part creates, as the additional information, image position information concerning image area classification according to image feature such as edge part, character part, picture part, halftone dot part or so.

19. (Withdrawn) The image processing apparatus as claimed in claim 1, wherein:
said additional information creating part creates, as the additional information, from the image data, other image data having an image quality different from the original image data.

20. (Currently Amended) An image processing apparatus, comprising:
an inverse converting part ~~decompressing~~ configured to decompress, into image data, a code stream generated as a result of converting image data into two-dimensional wavelet coefficients, quantizing the ~~same~~ coefficients, and coding the ~~quantization result~~ quantized coefficients; and

an off-rule zone information reading part ~~reading~~ configured to read additional information ~~which is~~ embedded in an off-rule zone in the code stream as a code, the off-rule zone being not decoded according to a JPEG 2000 standard rule,

wherein the off-rule zone is defined from a position at which a terminating code is provided in the code stream to a code length position defined by header information.

21. (Currently Amended) The image processing apparatus as claimed in claim 20, wherein:

the additional information is created by [[the]] an additional information creating part ~~elaimed in claim 1~~, and is embedded into the code stream by [[the]] an additional information embedding ~~elaimed in claim 1~~ part.

22. (Currently Amended) The image processing apparatus as claimed in claim 20, further comprising:

an additional information processing part ~~which performs~~ configured to perform processing concerning the image data based on the additional information read by means of said off-rule zone information reading part.

23. (Currently Amended) The image processing apparatus as claimed in claim 22, wherein:

said additional information processing part is configured to forcibly finishes finish decoding processing upon detecting ~~tamper~~ tampering based on a determination on the additional information read in case the additional information comprises tamper resistance information.

24. (Currently Amended) The image processing apparatus as claimed in claim 22, wherein:

said additional information processing part ~~generates~~ is configured to generate an alarm upon detecting ~~tamper~~ tampering based on a determination on the additional information read in case the additional information comprises tamper resistance information.

25. (Currently Amended) The image processing apparatus as claimed in claim 22, wherein:

said additional information processing part ~~does~~ is configured to not output a part having undergone ~~tamper~~ tampering upon detecting the ~~tamper~~ tampering based on a determination on the additional information read in case the additional information comprises tamper resistance information.

26. (Currently Amended) The image processing apparatus as claimed in claim 22, wherein:

said additional information processing part ~~performs~~ is configured to perform file arrangement concerning the relevant image data in case the additional information comprises management information for the image data.

27. (Currently Amended) The image processing apparatus as claimed in claim 22, wherein:

said additional information processing part ~~performs~~ is configured to perform access control for the relevant image data in case the additional information comprises management information for the image data.

28. (Currently Amended) The image processing apparatus as claimed in claim 22, wherein:

said additional information processing part ~~performs image processing such as~~ is configured to perform filtering processing ~~or so~~ depending on a respective one of image portions on the relevant image data in case the additional information comprises image

position information concerning image area classification according to an image feature ~~such~~ as including an edge part, a character part, a picture part, and a halftone dot part ~~or so~~.

29. (Currently Amended) The image processing apparatus as claimed in claim 22, wherein:

said additional information processing part ~~outputs~~ is configured to output image data having an image quality according to a payment condition in case the additional information comprises image data having an image quality different from the original image data.

30. (Currently Amended) An image reading apparatus comprising:
a photoelectric device reading an image of an original;
an addition determining part configured to selectively ~~determining~~ determine additional information concerning the image data read by means of said photoelectric device and to determine whether or not the additional information is to be embedded; and
the image processing apparatus claimed in claim 1 performing image processing including ~~processing of~~ embedding the additional information to the image data read by means of said photoelectric device in case embedding of the additional data is determined by means of said addition determining part.

31. (Currently Amended) An image reading apparatus, comprising:
a photoelectric device ~~reading~~ configured to read an image of an original; and
[[an]] the image processing apparatus claimed in claim 20 performing decompressing, into image data, code data created from converting image data into two-dimensional wavelet coefficients, quantizing the ~~same~~ coefficients, and coding the quantization result so as to compress the image data.

32. (Currently Amended) An image forming apparatus, comprising:
the image reading apparatus claimed in claim 30; and
a printer engine ~~forming~~ configured to form an image onto [[a]] paper based on image data decompressed from code data by a decompressing part after being read by means of said image reading apparatus, and being processed by the image processing apparatus of said image reading apparatus.

33. (Currently Amended) An image forming apparatus, comprising:
the image reading apparatus claimed in claim 31; and
a printer engine ~~forming~~ configured to form an image onto [[a]] paper based on image data decompressed from code data by a decompressing part after being read by means of said image reading apparatus, and being processed by the image processing apparatus of said image reading apparatus.

34. (Currently Amended) The image forming apparatus as claimed in claim 32,
further comprising an interface [[for]] configured to externally ~~transmitting~~ transmit the code data obtained from reading image data by means of said image reading apparatus and then processed by the image processing apparatus.

35. (Currently Amended) The image forming apparatus as claimed in claim 33,
further comprising an interface [[for]] configured to externally ~~transmitting~~ transmit the code data obtained from reading image data by means of said image reading apparatus and then processed by the image processing apparatus.

36. (Currently Amended) A computer-readable medium storing a program for causing a computer included in the image processing apparatus claimed in claim 1 to execute each part of said image processing apparatus recited in claim 1.

37. (Currently Amended) A computer-readable medium storing a program for causing a computer included in the image processing apparatus claimed in claim 20 to execute each part of said image processing apparatus recited in claim 20.

38-205. (Canceled)